

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Implementation of Sections 309(j) and)	WT Docket No. 99-87
337 of the Communications Act of 1934)	
as Amended)	
)	
Promotion of Spectrum Efficient)	
Technologies on Certain Part 90)	
Frequencies)	
)	
Establishment of Public Service Radio)	RM-9332
Pool in the Private Mobile Frequencies)	
Below 800 MHz)	

COMMENTS OF MOTOROLA

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SUMMARY

This proceeding is seeking comment on whether recent statutory changes impact the FCC's previous decision that private radio services, including private land mobile radio services, are exempt from competitive bidding procedures.

Motorola believes that the totality of the FCC's spectrum management responsibilities compels it to continue relying on engineering techniques, entry criteria and service rule provisions to avoid creating mutual exclusivity among private land mobile applications. The existing frequency advisory committees aid greatly in this effort and should continue to be utilized to promote efficient spectrum use and reduce FCC administrative burdens while, at the same time, ensuring that private wireless users have ready access to cost-effective communications solutions. Migrating to an auction overlay environment in the existing private land mobile frequency bands offers huge risks to a service that has proven invaluable to America's safety and economic development.

This is not to imply that Motorola believes that all is well with the private land mobile services. Motorola simply does not believe that auction mechanisms – even if tailored for private wireless needs – are a panacea for satisfying the needs of private wireless users in existing allocations. Most of the regulatory tensions that now exist within the private land mobile community can be greatly reduced through increased communications capacity. In Motorola's view, this is better accomplished through 1) new spectrum allocations, 2) a more certain transition to greater efficiency in existing frequency bands, and 3) completion of the Refarming process.

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Motorola hereby responds to the *Notice of Proposed Rule Making* in the above-captioned proceeding¹ by urging the FCC to ensure that any changes implemented do not undermine the fundamental nature of the private land mobile radio services. Neither the law nor the public interest compels the agency to abandon the existing regulatory structure that promotes spectrum efficient shared use as administered by frequency advisory committees. Removing the existing framework in favor of an “overlay auction” policy would jeopardize the continued availability of competitive wireless communications solutions that dramatically improve industrial and business productivity. As an alternative to auctions, the FCC should focus on other regulatory remedies,

¹ *Notice of Proposed Rule Making*, WT Docket No. 99-87, FCC No. 99-52, released March 25, 1999 (*hereinafter Notice or NPRM*).

including new spectrum allocations, to ensure that adequate capacity exists for private land mobile users.

I. Introduction.

This proceeding was initiated as a result of Congressional action to modify the FCC's statutory authority to resolve mutually exclusive license applications using competitive bidding mechanisms.² Previously, Section 309 of the Communications Act provided the FCC with limited authority to auction mutually exclusive applications for initial licenses and specifically exempted services where the licensee did not receive compensation from subscribers to the service.³ Under the former authority, the FCC determined that Private Mobile Radio Services (PMRS) authorized under Part 90 of the FCC's Rules were exempt from competitive bidding procedures.⁴

The *Balanced Budget Act of 1997* explicitly revised the Commission's competitive bidding authority and modified the nature of the services qualifying for an exemption from spectrum auctions to read as follows:⁵

(1) General Authority.--If, consistent with the obligations described in paragraph (6)(E), mutually exclusive applications are accepted for any initial license or construction permit, then, except as provided in paragraph (2), the Commission shall grant the license or permit to a qualified applicant through a system of competitive bidding that meets the requirements of this subsection.

² Balanced Budget Act of 1997, Pub. L. No. 105-33, §§ 3002.

³ Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, § 6002.

⁴ *Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, PP Docket No. 93-253, *Second Report and Order*, 9 FCC Rcd. 2350 at ¶ 32.

⁵ 47 U.S.C. § 309(j)(1), (2).

(2) Exemptions.--The competitive bidding authority granted by this subsection shall not apply to licenses or construction permits issued by the Commission--

(A) for public safety radio services, including private internal radio services used by State and local governments and non-government entities and including emergency road services provided by not-for-profit organizations, that--

(i) are used to protect the safety of life, health, or property; and

(ii) are not made commercially available to the public;

(B) for initial licenses or construction permits for digital television service given to existing terrestrial broadcast licensees to replace their analog television service licenses; or

(C) for stations described in section 397(6) of this title.

The subject *Notice* is seeking comment on whether these statutory changes impact the FCC's previous decision that private radio services, including private land mobile radio services, are exempt from competitive bidding procedures.⁶ In the event that the new law renders certain private wireless services as auctionable, the *Notice* also seeks comment on how the existing application policy and rules should be altered to comport with Congressional intent while fulfilling all of its relevant public interest obligations.

As further explained below, Motorola believes that the totality of the FCC's spectrum management responsibilities compels it to continue relying on engineering techniques, entry criteria and service rule provisions to avoid creating mutual exclusivity among private land mobile applications. The existing frequency advisory committees aid greatly in this effort and should continue to be utilized to promote efficient spectrum use

⁶ For the most part, Motorola's comments consider only the potential impact to private land mobile services authorized under Part 90 of the Commission's Rules.

and reduce FCC administrative burdens while, at the same time, ensuring that private wireless users have ready access to cost-effective communications solutions. Migrating to an auction overlay environment in the existing private land mobile frequency bands offers huge risks to a service that has proven invaluable to America's safety and economic development.

This is not to imply that Motorola believes that all is well with the private land mobile services. Indeed, Motorola fully appreciates why the FCC put forth such an exhaustive analysis of the private user community in its *Notice*. Motorola simply does not believe that auction mechanisms – even if tailored for private wireless needs – are a panacea for satisfying the needs of private wireless users in existing allocations. Most of the regulatory tensions that now exist with the private land mobile community can be greatly reduced through increased communications capacity. In Motorola's view, this is better accomplished through 1) new spectrum allocations, 2) a more certain transition to greater efficiency in existing frequency bands, and 3) completion of the Refarming process.

II. New Section 309(j) of the Communications Act Does Not Compel the FCC to Implement Private Wireless Licensing Policies Premised on Competitive Bidding.

As already noted, the Commission's revised auction authority essentially requires the FCC to use competitive bidding whenever mutually exclusive license applications exist except for services specifically exempted from the process. Thus, the first order of business is to determine which of the various private land mobile radio services are

covered by the competitive bidding exemption contained in Section 309(j)(2) of the Communications Act. The law is fairly specific with regard to the exemption of public safety radio services and Motorola agrees with the Commission's tentative conclusion that this group should at least encompass all entities eligible for licensing in the public safety radio pools, including the new 700 MHz allocation, as well as those channels specifically reserved for public safety use in the 220 MHz band and the VHF public coast service.⁷

Potentially less clear is the impact to other private wireless user groups that were previously exempted due to the FCC's interpretation that they are not primarily subscription based services. Additional Congressional direction is provided in the Conference Report to the *1997 Balanced Budget Act* which states:⁸

the exemption from competitive bidding authority for 'public safety radio services' includes 'private internal radio services' used by utilities, railroads, metropolitan transit systems, pipelines, private ambulances and volunteer fire departments.

⁷ Notice at ¶¶ 27-28. Motorola takes no position on the FCC's proposed finding that medical telemetry devices should also be defined within the statutory exemption afforded to public safety. Regardless of whether they are deemed to be exempt or not, Motorola believes that they would not satisfy the eligibility requirements to gain entry into the new public safety allocation at 700 MHz nor should they be eligible under any public safety allocations for two-way land mobile stations. As demonstrated in the 450 MHz band, these devices are incompatible with the predominant use of the spectrum and deserve their own allocation of dedicated spectrum. Motorola therefore supports the initiation of WT Docket No. 99-255 that intends to propose additional allocations for medical telemetry devices. *Notice of Proposed Rule Making*, WT Docket No. 99-255, FCC No. 99-182, released July 16, 1999.

⁸ H.R. Conf. Rep. No. 105-217, 105th Cong., 1st Sess., at 572 (1997) (*Conference Report*).

Congress rationalizes this extension of the public safety exemption with the following reasoning:⁹

“[t]hough private in nature, the services offered by these entities protect the safety of life, health, or property and are not made commercially available to the public.”

This wording requires the FCC to determine whether the list of exempted private wireless services contained in the Conference Report language is exhaustive or simply descriptive of the various types of services that warrant the exemption. In Motorola’s view, it is almost nonsensical to read the intent of Congress as applying only to the specific list of services contained in the report language. Such an interpretation would demand that the FCC arbitrarily and capriciously subject similarly situated private wireless services to disparate regulatory procedures.

For example, did Congress really intend to exempt the freight railway industry from competitive bidding procedures yet decide that such policies are appropriate for the interstate trucking industry? These two segments of the transportation industry compete directly for the transportation of goods (including hazardous materials) across the nation. Subjecting one and not the other to competitive bidding procedures would be grossly unfair and anti-competitive to the interstate trucking industry.

Other examples abound. Taxicabs perform the same basic function as metropolitan transit systems but would be subject to auctions whereas the local commuter rail system would not. Construction and/or demolition sites often require the use of

⁹ *Id.*

dispatch radios to control the movement of hazardous and explosive materials while protecting the safety of hundreds of on-site employees but would be subject to competitive bidding procedures whereas systems to monitor oil flow through a pipeline would not. Absent further clarification from Congress, Motorola believes that the FCC should view the list of exempted services provided in statutory language as illustrative and interpret the Act to exempt similarly situated private wireless services that are not offered to the general public.

To support this common sense reading of Section 309(j), Congress has provided the Commission with additional guidance on competitive bidding and license assignment mechanisms. For example, Section 309(j)(6)(E) of the Communications Act states that nothing in the implementation of competitive bidding shall “relieve the Commission of the obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means in order to avoid mutual exclusivity in application and licensing proceedings...”

In citing to Section 309(j)(6)(E), Congress explained that “the conferees are particularly concerned that the Commission might interpret its expanded competitive bidding authority in a manner that minimizes its obligations” to use “engineering solutions, negotiations, or other tools that avoid mutual exclusivity.”¹⁰ Existing private wireless licensing practices comport with the obligations of Section 309(j)(6)(E).¹¹

¹⁰ *Id.*

¹¹ This point is well supported by several Senators and Congressmen who point out that this section of law was specifically added to emphasize that the FCC is obligated to

Private system licenses have historically been awarded on a shared spectrum basis relying on certified frequency coordinators to locate usable spectrum for applicants. As the Commission has noted, “unless we alter these licensing schemes, licenses in these services will not be auctionable under the Balanced Budget Act.”¹² Motorola believes that the existing framework’s emphasis on spectrum sharing using frequency coordination is more appropriate for most private wireless users than wide area, geographic licensing which may be more easily administered through auctions.¹³

In its *Notice*, the Commission asks whether “[i]n light of the extensive modifications to our regulatory and technical framework adopted to further the efficient use of these bands, we seek comment on whether the public interest would best be served by retaining the current licensing scheme rather than adopting geographic licensing and competitive bidding.”¹⁴ As indicated in the above discussion, Motorola responds with an unequivocal yes.

consider ways to avoid mutual exclusivity among applicants before conducting an auction. See Letter to Chairman William E. Kennard from Rep. John D. Dingell, Rep. W.J. Tauzin, Sen. Tom Daschle, Sen. John B. Breaux, Sen. Spencer Abraham, and Sen. Slade Gorton (December 22, 1998).

¹² *Notice* at ¶58.

¹³ Further, the current frequency coordination process significantly reduces administrative burdens of the Commission. The coordinating committees already perform the vast majority of the work needed to issue a private radio or public safety license. In most cases, the FCC Commission endorses the coordinator’s recommendation, issues the license and updates the licensing database. If necessary, the FCC should consider delegating to the coordinators the last remaining portions of the licensing process (*i.e.*, assigning call signs). This would further reduce administrative burdens for the Commission and result in faster and more efficient license grants.

¹⁴ *Notice* at ¶68.

III. The Private Land Mobile Radio Services Need Greater Spectrum Capacity.

This proceeding has several goals. First and foremost, the FCC is obligated to explore whether changes to its licensing policies are dictated by the Congressional amendments to Sections 309. Another goal, however, is to ascertain whether the existing licensing scheme for private wireless services provides the proper incentives to utilize spectrum effectively and efficiently. To this end, the *Notice* tends to view the potential auctioning of wide area geographic licenses in existing private wireless bands as a regulatory alternative that will provide more economic incentives for more effective spectrum use.

As stated in the previous section, Motorola believes the totality of the FCC's spectrum management obligation should lead the Commission to forego overlay auctions in private land mobile bands. However, Motorola concedes that new incentives and regulatory processes are needed to extract more capacity out of existing allocations in order to help meet the growing demand for both dispatch voice-oriented and wideband video, graphics and data applications. In this section, Motorola raises a few regulatory options to augment the existing Refarming policies and help the industry achieve some of the lofty goals of that prolonged proceeding.¹⁵

¹⁵ See e.g., *In the matter of Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Services*, PR Docket No. 92-235, *First Report and Order and Further Notice of Proposed Rule Making*, 10 FCC Rcd. 10076 (1996).

The FCC should understand very clearly, however, that even assuming an ideal migration to very narrowband technologies in the 150 MHz, 450 MHz and 800 MHz bands, the non-public safety, private land mobile services need new spectrum allocations to meet growing demand for new, bandwidth-intensive technologies. Transitioning the existing allocations to 12.5 kHz or even lesser bandwidths will not “create” the spectrum capacity needed for advanced services or even satisfy the growing demand for voice traffic. The lack of spectrum “green space” into which newer technologies employing wider bandwidths can be deployed will frustrate the development of advanced private wireless systems contrary to the FCC’s spectrum management obligations contained in Section 309(j)(3) of the Communications Act.

Therefore, Motorola urges the FCC to fulfill its Congressional obligation¹⁶ and act favorably upon the petition filed by the Land Mobile Communications Council (LMCC) for a new allocation of spectrum for the private system community.¹⁷ Motorola believes that an allocation of new spectrum for private users will not only spur the development of advanced private wireless systems, but will also serve as a partial relief valve for the overcrowding in the existing bands to the benefit of the refarming process. Consistent with the needs expressed in comments to the FCC’s *Notice of Proposed Rule Making*

¹⁶ The *Balanced Budget Act* of 1997 urged the FCC and the NTIA to consider the need to allocate additional spectrum for shared or exclusive use by private wireless services in a timely manner. *Conference Report* at 575.

¹⁷ See e.g., *An Allocation of Spectrum for the Private Mobile Radio Services*, RM-9267, *Petition for Rule Making*, submitted by the Land Mobile Communications Council (LMCC) on April 22, 1998 [*LMCC Petition*]. In its petition, the LMCC demonstrated a

concerning the commercial use of the 746-806 MHz band, the FCC should immediately allocate additional spectrum for private wireless systems.¹⁸

A. The FCC Should Complete the Refarming Process.

The primary objective of the Refarming proceeding is to encourage more efficient use of the existing spectrum bands allocated to private systems below 800 MHz. To the extent that the Refarming process has been implemented, users have found insufficient opportunities to replace existing systems with more narrowband technologies. For the most part, continued interference from 25 kHz adjacent channel users as well as requirements to protect associated 25 kHz adjacent channel receivers serve as disincentives to spend the resources to narrowband systems in the refarming bands.

The effects of this “tragedy of the commons” have been well documented with respect to shared private land mobile frequency bands. While some argue for conversion of the spectrum to for-profit carriers and auctions as the means to expedite the technology transition, Motorola believes that the Commission should instead impose a “date-certain” for licensees to replace 25 kHz per voice path systems with 12.5 kHz technology or equivalent.

need for 15 MHz of new spectrum for PMRS by the year 2000, 44 MHz of new spectrum by the year 2004, and 125 MHz of new spectrum by the year 2010.

¹⁸ *In the Matter of Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules*, WT Docket No. 99-168, *Notice of Proposed Rule Making*, released June 3, 1999. Many of the comments submitted in this proceeding, including Motorola’s, highlighted the urgent need for additional private wireless spectrum. See e.g., Comments of Motorola, Comments of MRFAC, Comments of ITA, Comments of Union Pacific Railroad.

The date-certain migration period to 12.5 kHz equipment has been consistently recommended by Motorola throughout the Refarming proceeding.²⁰ Other private wireless interests including APCO and the LMCC also recommended that the FCC implement a mandatory transition date for 12.5 kHz.²¹ Without such impetus, the Refarming process could be exceedingly prolonged. The date certain could be tailored to minimize burdens on rural or other users whose use of 25 kHz technologies do not affect other potential users.

In addition, the Commission should strive to complete the last remaining item open in the Refarming proceeding, the conversion of the former UHF offset channels and creation of a new low power pool of frequencies.²² Without this step completed, increased utilization and efficiencies of UHF Refarming bands cannot be realized. Motorola believes that the Commission needs to find a workable solution to the medical telemetry issue so that existing low power users may begin their transition to those

²⁰ See e.g., *Comments of Motorola to the Further Notice of Proposed Rule Making*, PR Docket No. 92-235, submitted Nov. 20, 1995 at 9.

²¹ See e.g., *Petition for Reconsideration and Clarification*, The Association of Public Safety Communications Officials - International, Inc., PR Docket No. 92-235, submitted Aug. 18, 1995, at 2.

²² Motorola strongly supports the transition plan recommended several years ago by the LMCC that, in part, identifies a total of 104 channel pairs in the 450 MHz band for continued low power use. In addition, a portion of these channels, 25 pairs in all, were recommended to be assigned on an itinerant basis without benefit of frequency coordination. Motorola recommends that the FCC consider additional means of reducing the licensing burdens on these less sophisticated private wireless systems by modifying its licensing processes so that users are authorized to use of all 50 of the itinerant channels on a single license. This would maximize user flexibility to respond to on-site instances

channels set aside specifically for their use. The delays associated with this step have reduced any market incentive for users to migrate to narrowband equipment as many low power users are reluctant to make any product purchases until they begin their relocation. Further, new high power users cannot access these "new" channels for primary operations until some time after this migration begins.

B. The FCC Should Continue to Promote Shared Infrastructure Systems.

In attempting to define private mobile service, the *Notice* asks whether the definition should include systems that operate on a cooperative or multiple-license basis.²³ As identified in the *Notice*, such arrangements may involve cost reimbursements that may be considered compensation to the licensee.²⁴ If the definition of private mobile service requires that licensees receive no compensation, the regulatory status of such systems could be called into question. The Commission has also inquired about multiple-licensed systems and community repeaters and seeks comments on whether such systems should be exempt from the auction process.²⁵

As further described below, Motorola believes that the success of the private wireless services is very much dependent on the ability of users to defray costs through shared infrastructures. Not only do such systems allow for lower cost solutions to users

of interference without impacting other primary users of the spectrum.

²³ *Notice* at ¶33.

²⁴ *Id.*

²⁵ *Id.* at ¶46

who want greater coverage, but they also help to increase spectrum efficiencies by allowing many more users to operate on the same channel at the same site. Further, as systems become more sophisticated and complex, private users – who are not necessarily experts in wireless communications systems – will require assistance in the management and maintenance of their systems.

As detailed in the *LMCC's Petition*, even assuming a healthy migration of a portion of the current private traffic to commercial systems, there will remain a need for additional spectrum for PMRS users to accommodate the demand for growth and advanced services in the years to come. Much of the future demand will be for wideband applications that will likely create new incentives for shared infrastructures. Initial deployment of some wideband services will likely be expensive requiring users with such communications needs to seek ways to reduce costs. Also, recognizing the limited availability of spectrum suitable for advanced private wireless services, it is likely that bandwidth will be at a premium. Thus, from an efficiency standpoint, shared systems will likely help meet the needs of the maximum number of users.

Even such shared arrangements, however, contain elements of control essential to private licensees. Given the applications of large private users, it is quite different to share spectrum with a defined set of users on a contractual basis than to share with the general public on a CMRS system. For example, whenever a disaster or emergency situation strikes, the general public traffic would essentially commandeer a CMRS

system, leaving private users with no capacity. On the other hand, sufficient spectrum allocated specifically for private wireless users would prevent that problem, whether users chose individual operations or shared operation under a defined contract among the entities involved.

While Motorola shares the Commission's concerns about "sham" operations that mask for-profit commercial ventures on private frequencies, we strongly urge the FCC to simply and clearly articulate the obligations and limitation of multiple-licensed and shared infrastructure systems as opposed to prohibiting such arrangements.

IV. Conclusion.

The private wireless radio services are comprised of a complex group of users with diverse and often-times conflicting requirements. While it may be tempting for the Commission to "wash its hands" of the problems that these users sometime create, the FCC's spectrum management obligations prevent it from deciding their regulatory fate on the basis of administrative convenience. Rather, shared spectrum use and specialized service contours are the most appropriate means of regulating these services. In Motorola's view, this and a rational reading of the *1997 Balanced Budget Act* renders the private wireless services exempt from the competitive bidding procedures.

This should not, however, render these users exempt from additional spectrum allocations. The private wireless industry has demonstrated time and again its need for new spectrum and its ability to utilize spectrum when provided. Additional spectrum

capacity will eliminate much of the regulatory conflicts that typically arise and Motorola urges the FCC to take the necessary steps to create that capacity.

Respectfully Submitted

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